

CLAIMS

What is claimed is:

- 1 1. A method of manufacture of magnetic heads which include CoFe elements using
- 2 CMP, comprising:
 - 3 A) providing a slurry of Al₂O₃;
 - 4 B) adjusting the concentration of H₂O₂ in said slurry to within a range of 6-12%
 - 5 by volume; and
 - 6 C) balancing mechanical polishing action.
- 1 2. The method of manufacture of magnetic heads of claim 2, wherein C) includes:
 - 2 adjusting the table speed of a mechanical polisher to within a range
 - 3 of 55-90 rpm.
- 1 3. The method of manufacture of magnetic heads of claim 2, wherein C) includes:
 - 2 adjusting polishing pressure to within a range of 5-7 psi.
- 1 4. The method of manufacture of claim 1, wherein:
 - 2 said slurry of A) includes BTA (1H-benzotriazole).
- 1 5. The method of manufacture of claim 1, wherein:
 - 2 said slurry of A) includes Isothiazolone.
- 1 6. The method of manufacture of claim 1, wherein:
 - 2 the particle size of Al₂O₃ is in the range of 50-500nm.

1 7. The method of manufacture of claim 1, wherein:
2 the pH of the slurry is in the range of 4-6.

1 8. A magnetic head which include CoFe elements produced by the process
2 comprising:
3 A) providing a slurry of Al₂O₃;
4 B) adjusting the concentration of H₂O₂ in said slurry to within a range of 6-12%
5 by volume; and
6 C) balancing mechanical polishing action.

1 9. The magnetic head of claim 8, wherein C) of the process further comprises:
2 adjusting the table speed of a mechanical polisher to within a range of 55-
3 90 rpm.

1 10. The magnetic head of claim 8, wherein C) of the process further comprises:
2 adjusting polishing pressure to within a range of 5-7 psi.

1 11. The method of manufacture of claim 8, wherein:
2 said slurry of A) includes BTA (1H-benzotriazole).

1 12. The method of manufacture of claim 8, wherein:
2 said slurry of A) includes Isothiazolone.

1 13. The method of manufacture of claim 8, wherein:
2 the particle size of Al₂O₃ is in the range of 50-500nm.

1 14. The method of manufacture of claim 8, wherein:
2 the pH of the slurry is in the range of 4-6.

15. A slurry for CMP of magnetic head elements including CoFe material,
comprising:
1 Al_2O_3 as an abrasive; and
2 H_2O_2 in concentration within a range of 6-12% by volume.

1 16. The slurry for CMP of magnetic head elements of claim 15, further comprising:
2 BTA (1H-benzotriazole).

1 17. The slurry for CMP of magnetic head elements of claim 15, further comprising:
2 Isothiazolone.

1 18. The slurry for CMP of magnetic head elements of claim 15, wherein:
2 the particle size of Al_2O_3 is in the range of 50-500nm.

1 19. The slurry for CMP of magnetic head elements of claim 15, wherein:
2 the pH of the slurry is in the range of 4-6.